

FIG. 1

200

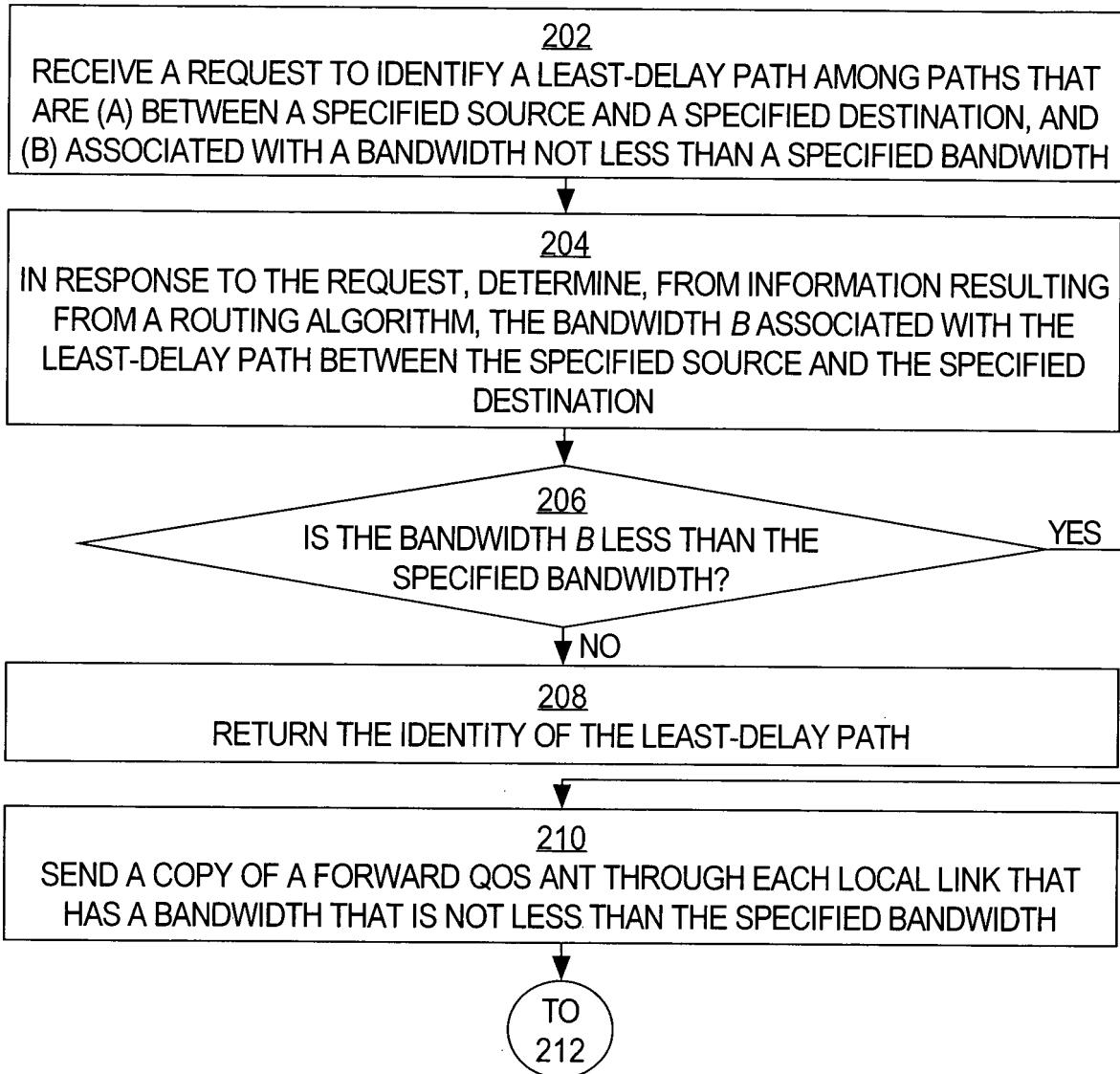


FIG. 2A

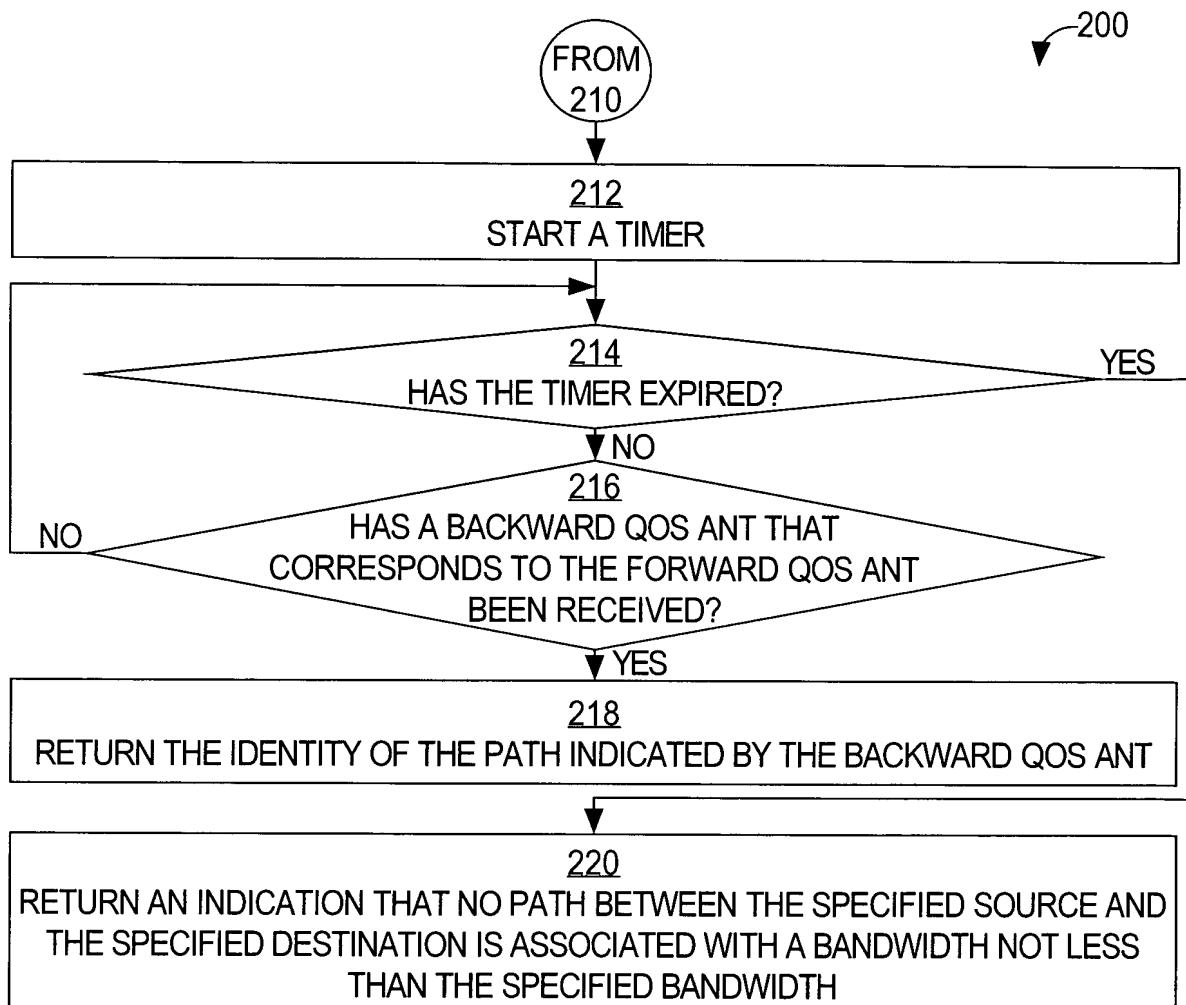


FIG. 2B

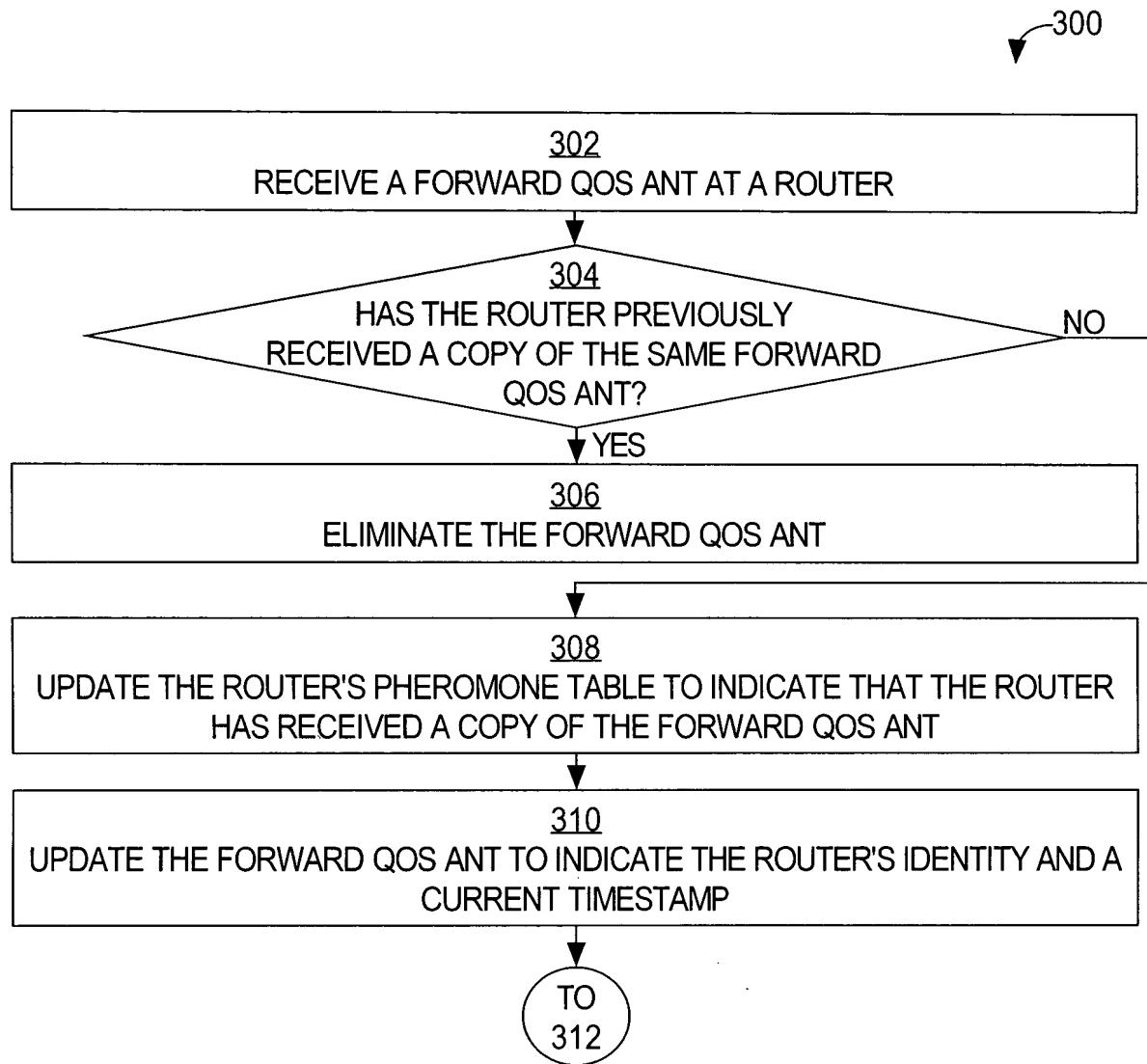
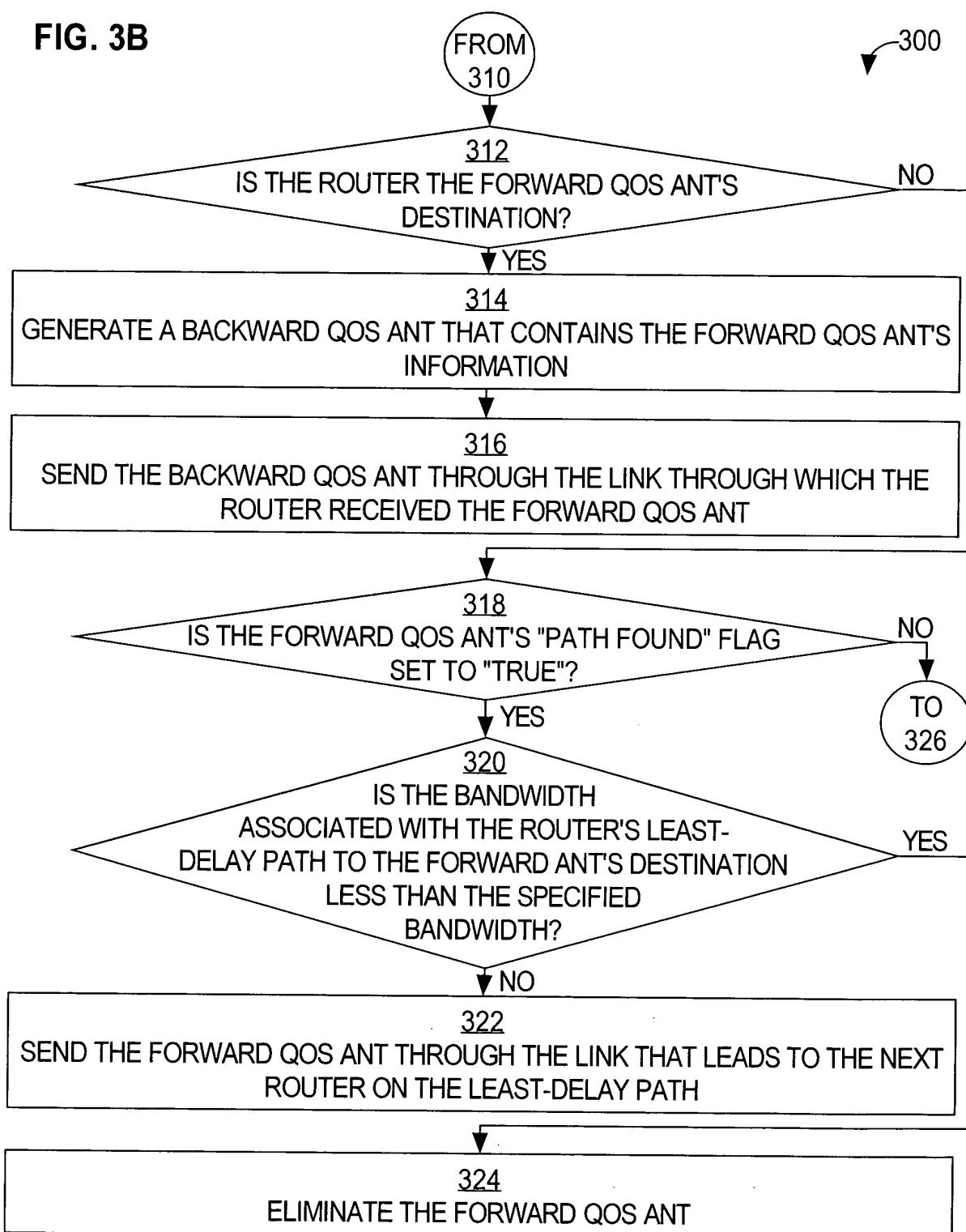


FIG. 3A

FIG. 3B



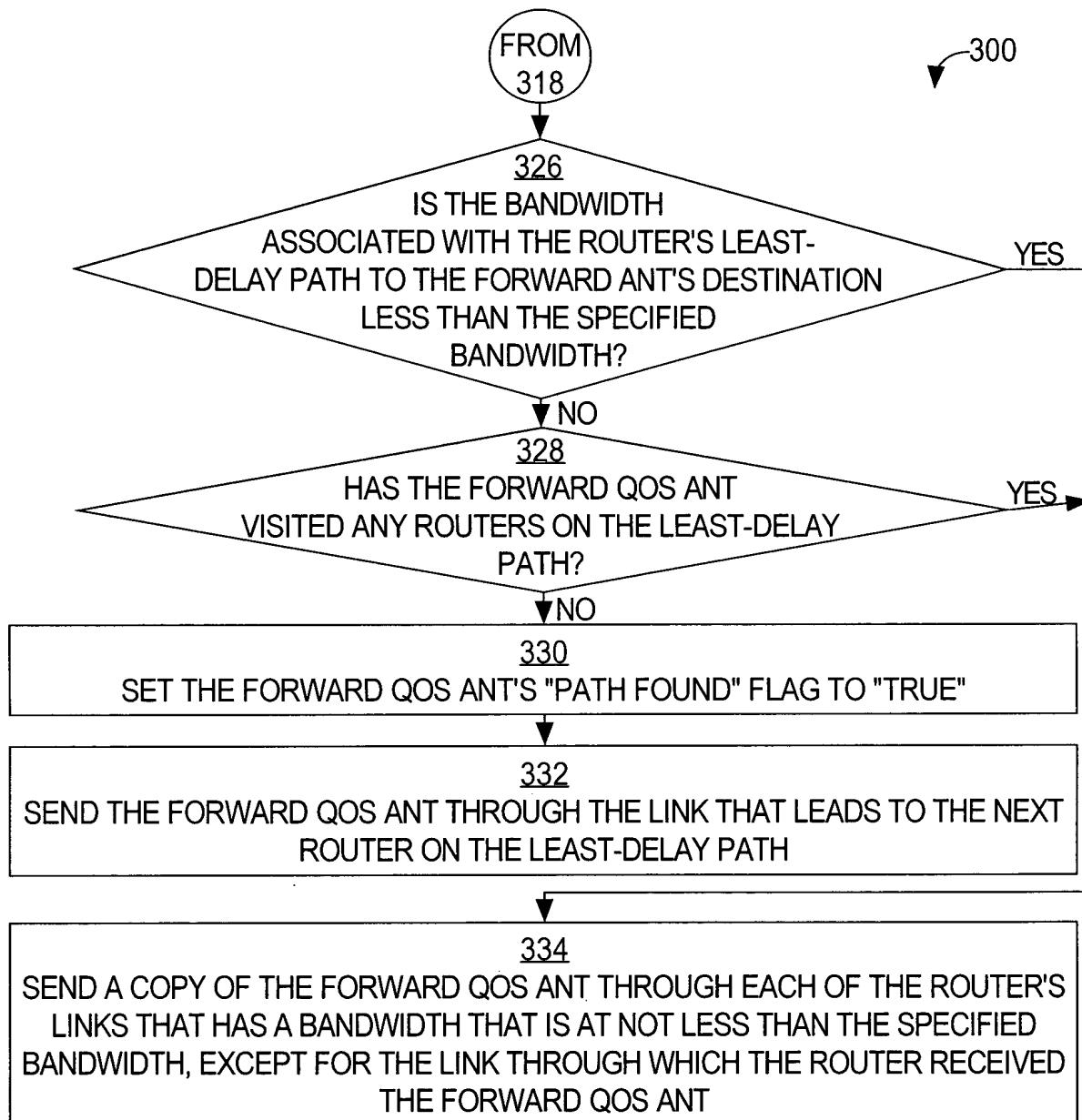


FIG. 3C

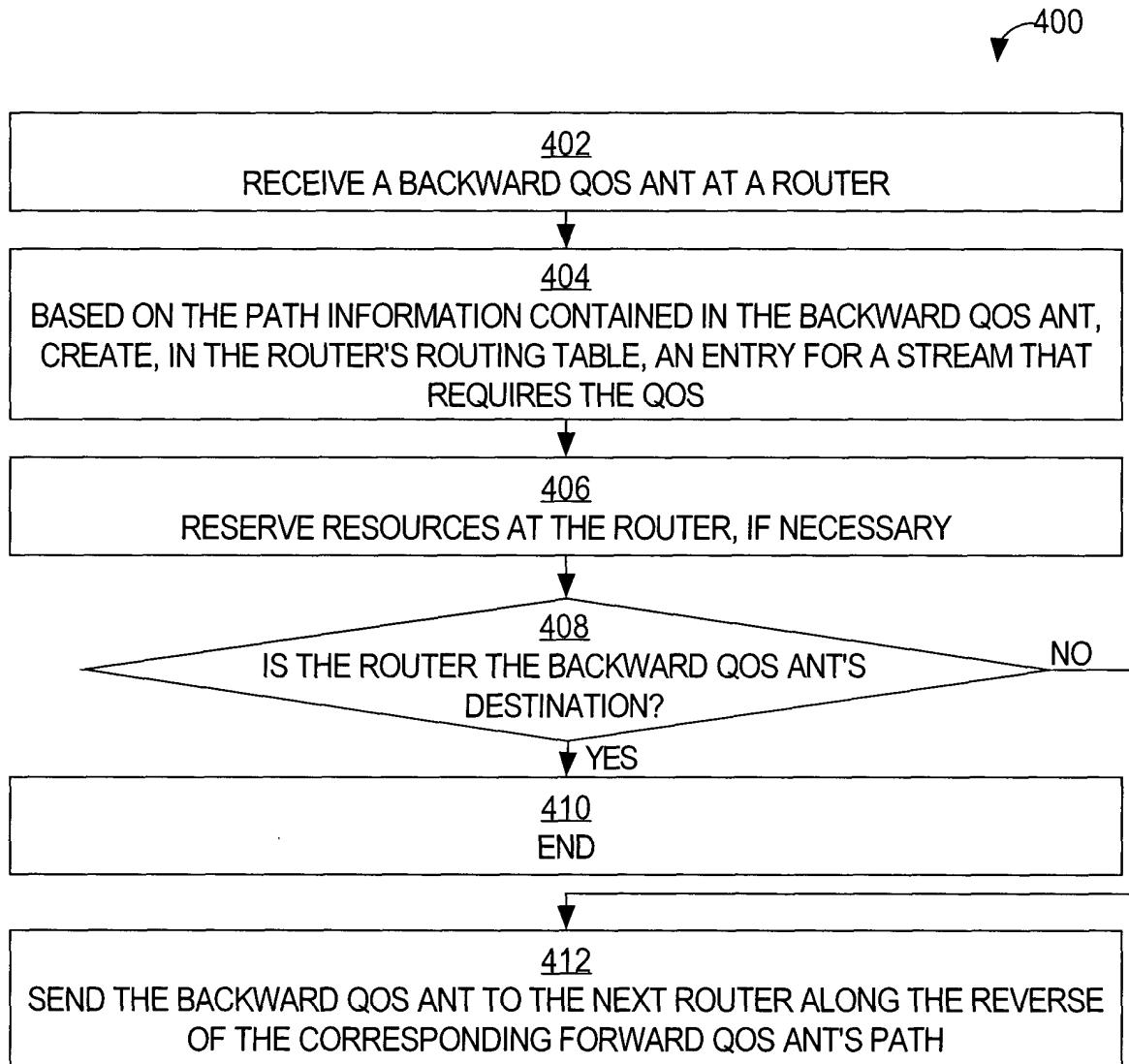


FIG. 4

500

502
RECEIVE A REQUEST TO IDENTIFY A LEAST-COST PATH AMONG PATHS THAT ARE
(A) BETWEEN A SPECIFIED SOURCE AND A SPECIFIED DESTINATION, AND (B)
ASSOCIATED WITH A DELAY NOT GREATER THAN A SPECIFIED AMOUNT OF TIME

504
IN RESPONSE TO THE REQUEST, DETERMINE, FROM INFORMATION RESULTING
FROM A ROUTING ALGORITHM, THE DELAY D ASSOCIATED WITH THE
LEAST-DELAY PATH BETWEEN THE SPECIFIED SOURCE AND THE SPECIFIED
DESTINATION

506
IS THE DELAY D GREATER THAN THE
SPECIFIED AMOUNT OF TIME?

NO

YES

508
RETURN AN INDICATION THAT NO DATA PACKET CAN BE TRANSFERRED ALONG
ANY PATH BETWEEN THE SPECIFIED SOURCE AND THE SPECIFIED DESTINATION
WITHIN THE SPECIFIED AMOUNT OF TIME

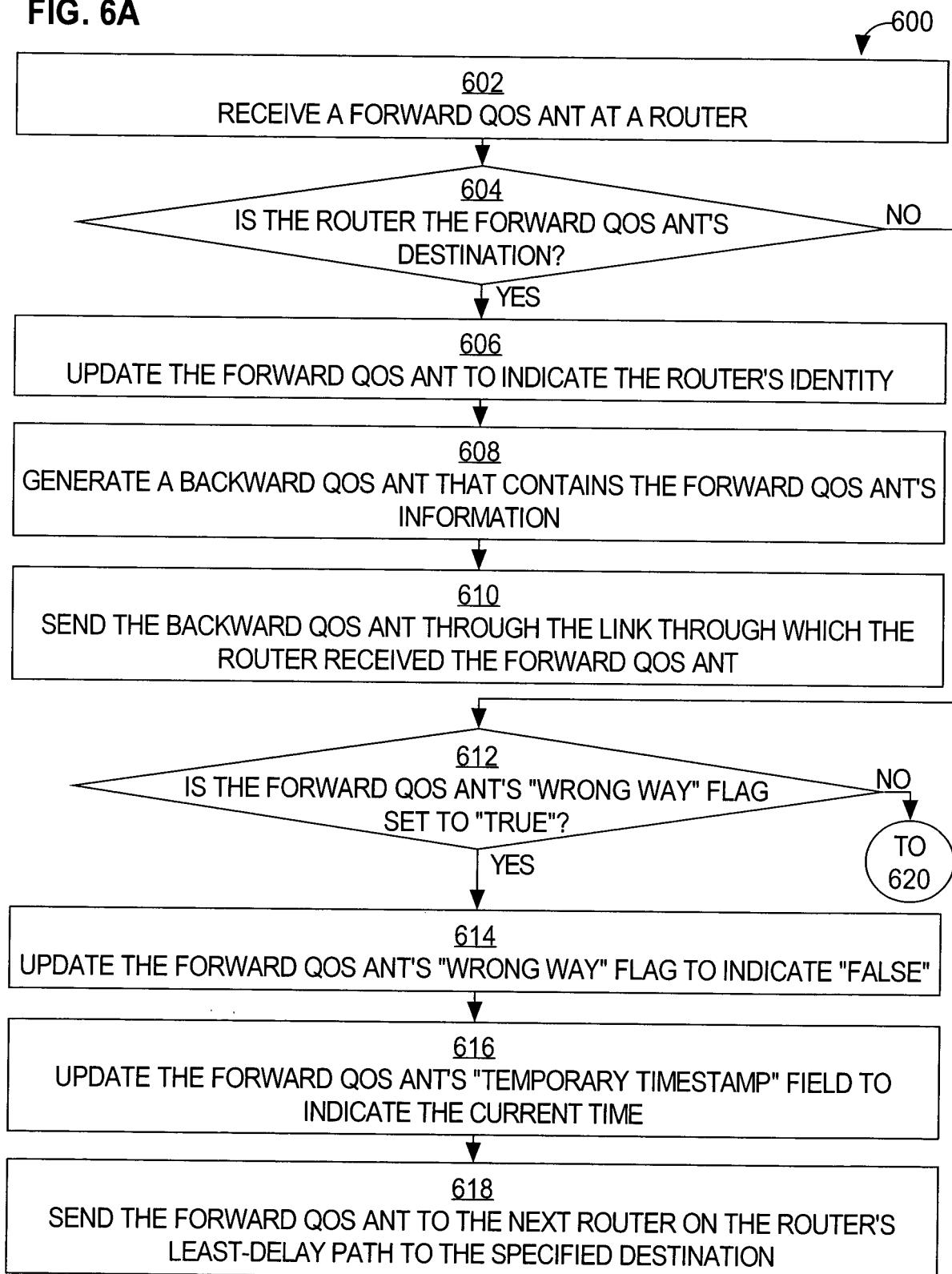
510
SEND A FORWARD QOS ANT TO THE NEXT ROUTER ON THE LEAST-COST PATH
TO THE SPECIFIED DESTINATION

512
RECEIVE A BACKWARD QOS ANT THAT CORRESPONDS TO THE FORWARD QOS
ANT

514
RETURN THE IDENTITY OF THE PATH INDICATED BY THE BACKWARD QOS ANT

FIG. 5

FIG. 6A



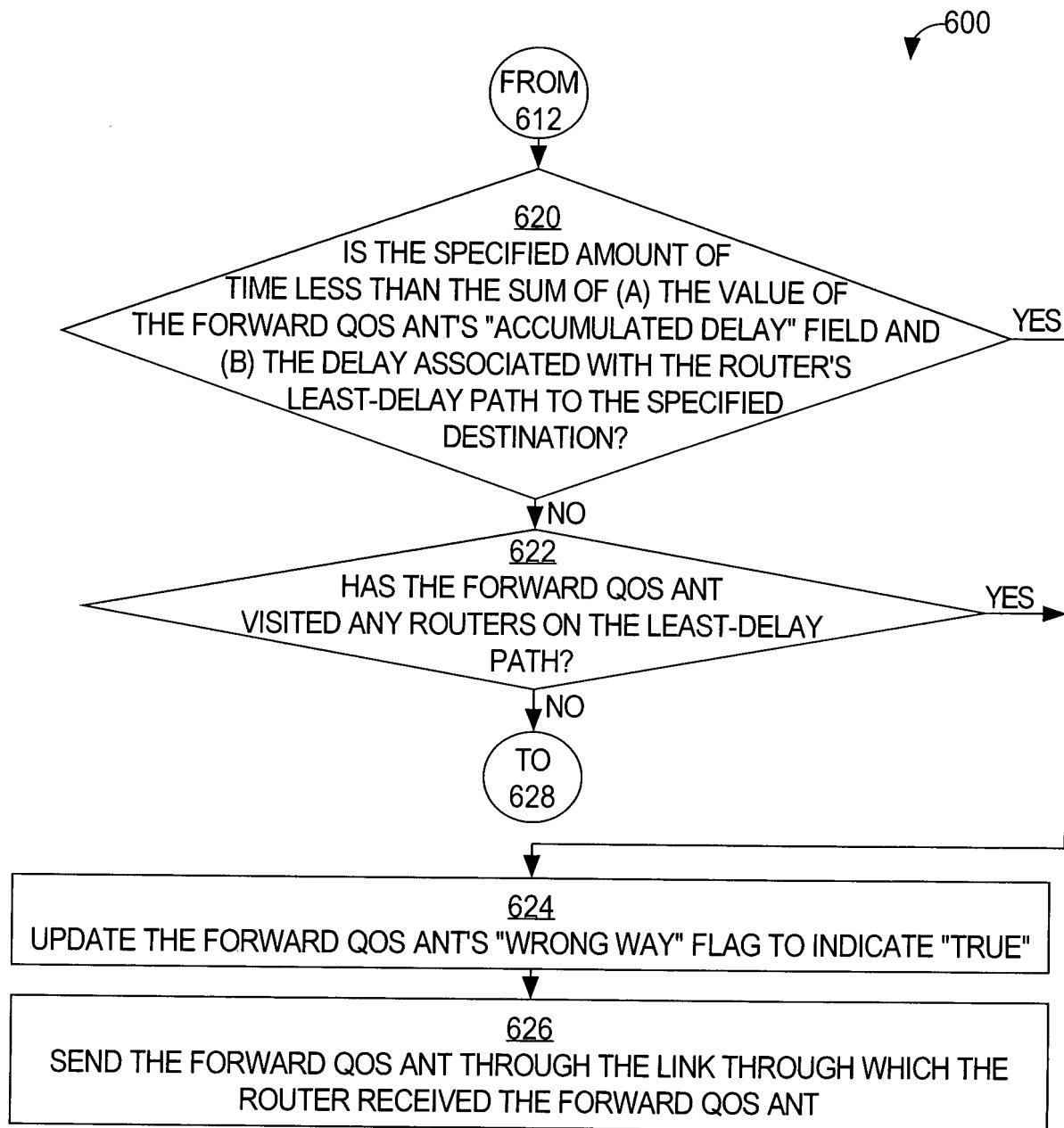


FIG. 6B

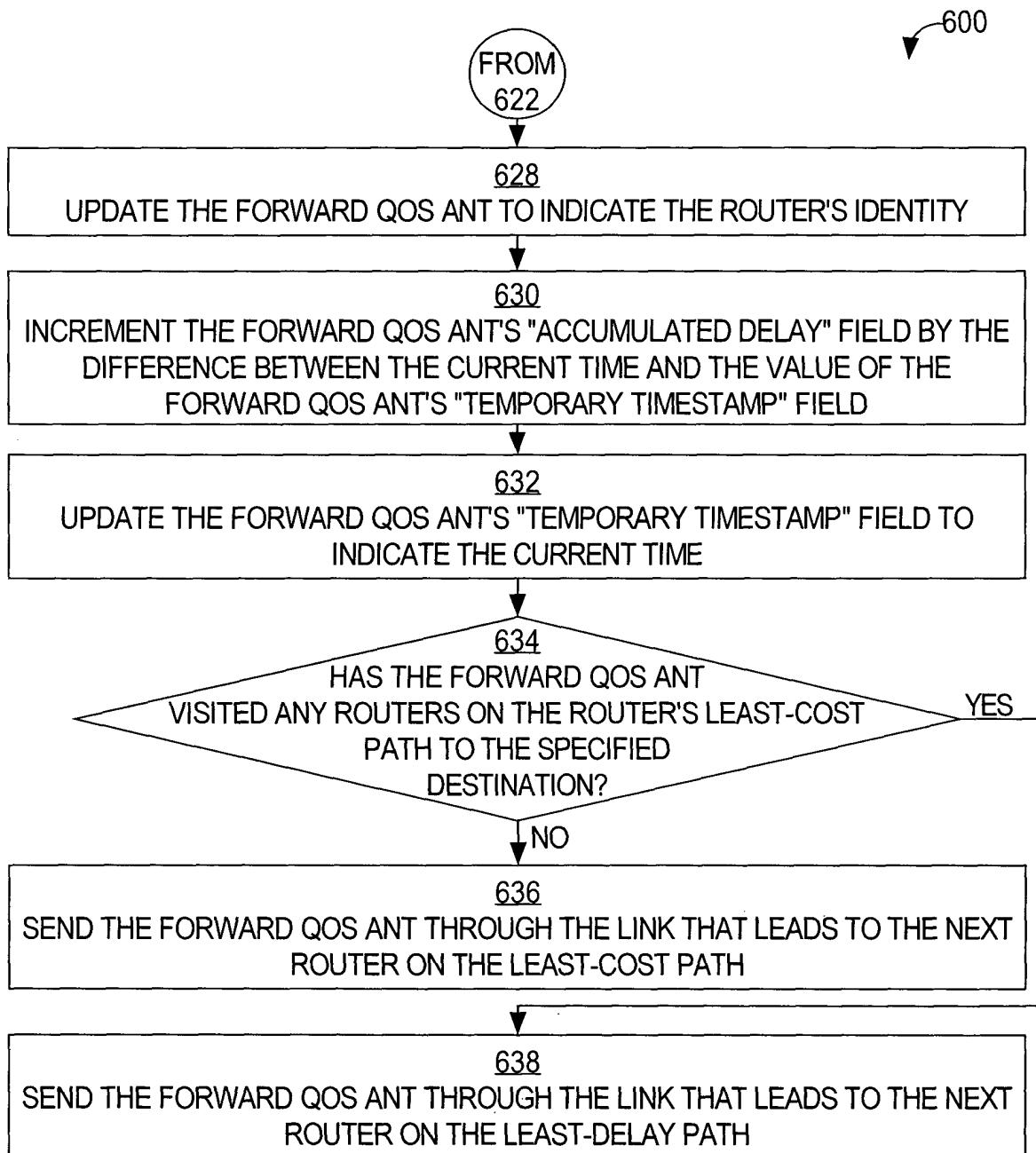


FIG. 6C

Title: ANT-BASED METHOD FOR DISCOVERING A NETWORK
PATH THAT SATISFIES A QUALITY OF SERVICE REQUIREMENT

Inventor: Fuyong Zhao

Date.: September 16, 2003

Docket No. 50325-0803

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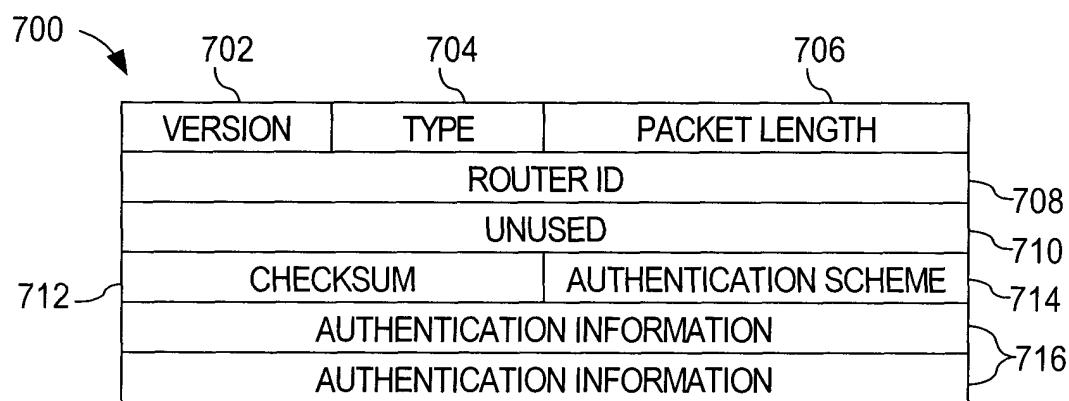
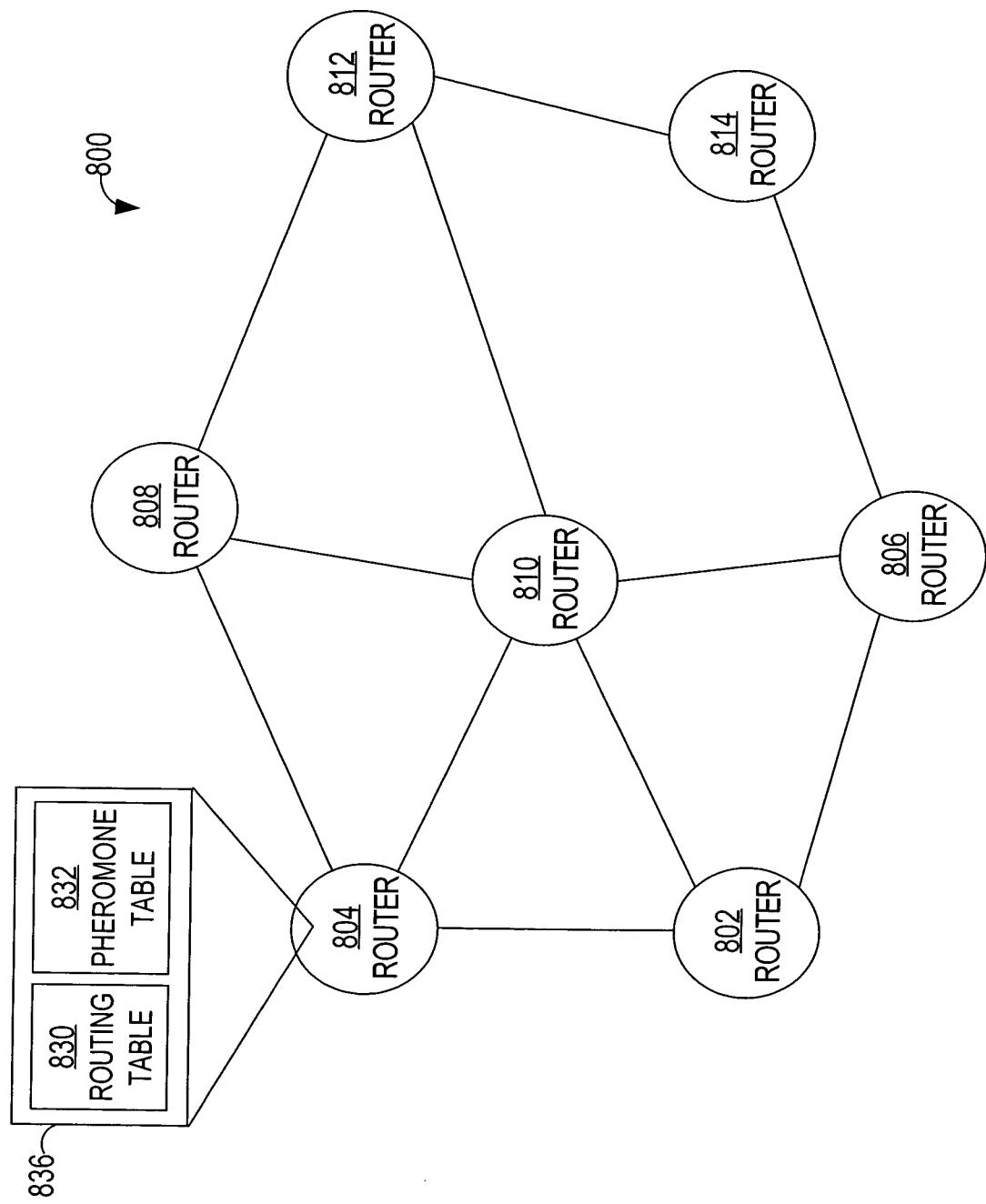


FIG. 7

FIG. 8



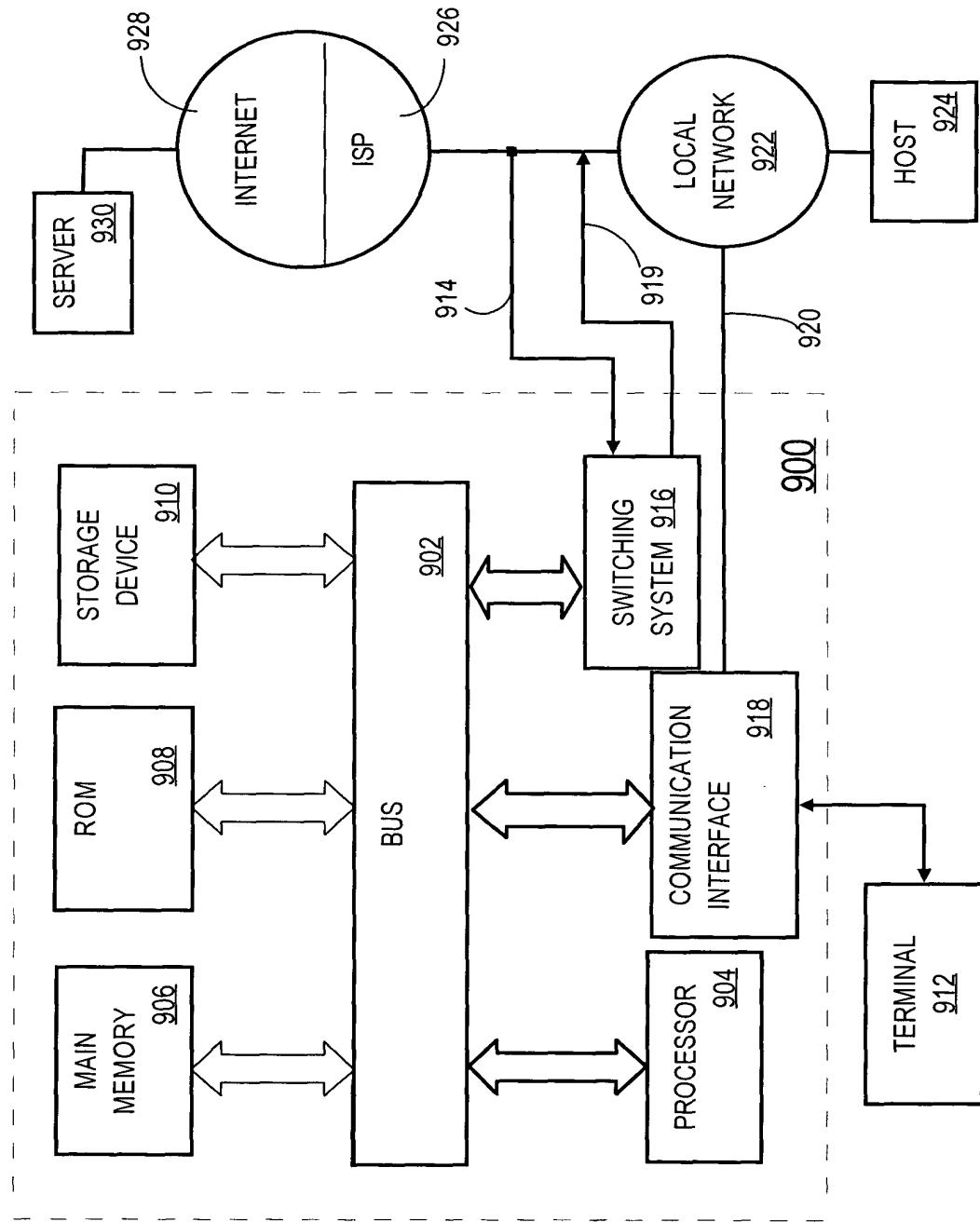


FIG. 9